Seminars in Health Care Delivery

Changing Physician Payment for Medicare Patients

Projected Effects on the Quality of Care

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This feature will appear regularly in The Western Journal of Medicine. *It is intended to cover recent developments in a broad range of issues that will have an impact—either directly or indirectly—on clinical practice. Occasionally the seminars may include informed speculation about likely future developments.*

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Congress and the Reagan Administration, in an effort to "contain" costs, are considering changes in the way physicians are paid when they care for Medicare patients. By examining the effects on quality of care of several alternative ways physicians might be paid, including modified fee for service, physician diagnosis-related groups and capitation through health maintenance organizations, we can predict the kinds of effects on quality of care most likely to occur and the kinds of patients most likely to be affected. Under each of the payment alternatives, poorer and sicker patients are at greatest risk for reduced access to care and quality of care. These findings underline the need for rigorous experiments to assess the effects of changes in physician payment on quality of care and the need for monitoring and assurance of quality in a new payment system.

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Congress and the Reagan Administration are considering changes in the way physicians are paid when they care for Medicare patients. Insurance companies have begun to modify reimbursement methods for physicians' services. The driving force behind these changes is the perceived need to "contain" costs. In addition, the fee-for-service system used by Medicare to reimburse physicians has been criticized because it rewards technical services (doing a biopsy) more than cognitive ones (talking to a patient).

Alternative methods to pay for physicians' services have been proposed. Each is being evaluated primarily for its potential to slow increases in costs of medical care. Effects on access to care and quality of care, however, are also being considered. We have recently attempted to project (the data to do more than project are absent) the effects of alternative payment methods on the quality of care delivered to Medicare beneficiaries.[1] In this paper, we will briefly describe these alternative payment methods and summarize the likely effects of each on the quality of care. We are unable to predict the precise impact with any confidence. We are able to suggest the kinds of effects that are most likely to occur and the kinds of patients who are most likely to be affected.

The uncertain impact implies a need for rigorous, experimental assessment of changes in payment mechanism on quality of care and for monitoring and assurance of quality of care in any new payment system. By predicting the possible

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ABBREVIATIONS USED IN TEXT
DRG = diagnosis-related group
HMO = health maintenance organization

effects of a change, the work reported here can guide the design of activities to assure quality of care if an alternative payment system is adopted.

Alternatives to the Current Physician Payment System

The traditional basis for Medicare's reimbursement of physician services has been "customary, prevailing and reasonable charges" for each of many units of service.[2-4] Recent modifications to increase the incentive to accept assignment do not affect many traditional criticisms of the current reimbursement system—namely, that it is inflationary; lacks an incentive to provide medical services efficiently, and inappropriately encourages the provision of inpatient care, surgical services and technical procedures over outpatient, medical and more "cognitive" services.[3,5-8]

Alternative payment methods differ from the current Medicare fee-for-service system in several ways: the relative remuneration for different physician services, the unit of services for which a physician is paid (such as an entire hospital stay instead of each patient visit) and organizational influences such as the freedom with which a physician can order a service.[3,5,9,10] We will briefly describe three possible methods. A more extensive discussion of alternative physician payment methods can be found in Jencks and Dobson[5] or a recent report from the Office of Technology Assessment.[10]

Fee for Service With Revised Fee Schedule

Under one alternative, physician services would be reimbursed by fee for service according to an explicit fee schedule, with both relative and absolute fees for each service determined by some means other than the customary, prevailing and reasonable mechanism. Such a fee schedule might be based on studies that impute a cost for providing each of several types of physician visits and procedures as illustrated by the approach of Hsiao and Stason,[11] or in other ways.[5]

We will not specify how the fee schedule is determined, but will assume that the resulting fee schedule differs from the customary, prevailing and reasonable fees now used as follows: it reduces (for similar services, such as a routine office visit) differences between fees that Medicare would pay specialists and generalists; it reduces the difference Medicare would pay for similar services when done in an inpatient versus an outpatient setting, and it reduces the difference in net physician compensation per hour paid by Medicare for surgical and technical procedures relative to medical and more cognitive services.

Physician Diagnosis-Related Groups

Under payment by physician diagnosis-related groups (DRGs) for inpatient physician services, a single payment would be made for all physician services associated with an admission to hospital, including fees of consultants; the payment would not include hospital costs or ancillary services now covered by the hospital payment under Medicare's prospective-payment system. Payment for each patient would be adjusted by the same disease categories (DRGs) now used for Medicare hospital payment.

The recipient of the lump sum payment could be the attending physician, who would contract with consulting physicians for their services and pay them out of the lump sum. Alternatively, the lump sum could be paid to the hospital staff, with subsequent distribution of the payment among individual physicians according to rules established by the hospital staff—for example, each physician could be paid a share based on accumulated units of work. Other possible arrangements, such as payment of the lump sum to the hospital,[5] will not be considered here.

Health Maintenance Organizations for Medicare Beneficiaries

The increased use of capitation payments for Medicare beneficiaries has received much attention.[5,10,12] One version of this option is to expand the use of health maintenance organizations (HMOs) and similar prepaid plans by Medicare beneficiaries; HMOs that enrolled Medicare beneficiaries would conform to rules established by Medicare. Medicare has already begun to increase the use of HMOs by Medicare recipients.[13] Few Medicare beneficiaries are now enrolled in HMOs. We will consider the effects on quality of care of large increases in the number of Medicare beneficiaries in HMOs.

The Influence of Physician Payment Mechanisms on Quality of Care

The quality of personal medical care can be considered to be composed of the quality of technical care, the quality of the art of care and the interaction between the two. Quality of technical care includes the adequacy of the diagnostic and therapeutic processes. The art of care relates to the manner and behavior of the provider in delivering care to and communicating with a patient.[14] High quality of care should be reflected in good patient outcomes, such as emotional well-being, adequate physical capacities for carrying out ordinary tasks or at least a reduction in the rate of decline in health status.[15]

The quality of personal medical care is in large part determined by the amount and type of medical services used, including physicians' time and effort, and the way these services are used to diagnose and treat a patient's condition.[1] In an ideal world, decisions about which services to use would be made jointly by physician and patient in an effort to improve the patient's health as the patient perceives it; these decisions include which diagnostic services to use, whether to prescribe drugs and whether hospital care is needed. Each physician payment mechanism can be examined in an attempt to predict how it will change these patient care decisions and, in turn, how quality of care would be affected.[1,16]

Physician payment systems contain different financial incentives that could influence both patient and physician decisions. The financial incentives facing patients affect their decisions through out-of-pocket costs. If one patient's out-of-pocket costs from deductibles and coinsurance are greater than another's, that patient will on average receive less care.

The physician's ethic requires that physicians function entirely as patients' agents, considering only the patients'

interests when making patient care decisions; physicians are not to consider their own financial or other interests. It is reasonable to assume that physicians sometimes fall short of this ideal. If a physician is considering doing a nonrisky diagnostic procedure that has only a small chance of contributing useful information, he or she may be more likely to do the procedure if a large fee is involved. A surgeon may be less likely to ask a consultant to see a patient before a surgical procedure if the consultant's fee must be paid out of the fixed sum that the surgeon receives for the operation. In marginal or "grey" areas, financial considerations will affect some patient care decisions. This in turn can influence quality of care.

Alternative payment systems may also entail major changes in the organization of medical care. For instance, the care provided through an HMO differs from that in fee for service not only in the financial incentives facing physicians and patients, but also in the organizational structure in which care is provided. An HMO may require more utilization review or may require practice in a multispecialty environment. The HMO may restrict the availability of hospital beds or consultations.[1,16]

It is difficult to predict with confidence the precise effects on quality of care of alternative physician payment mechanisms.[1,16] The task is made more difficult by the presence of extensive changes in medical care in the United States in the past few years, such as the increasing supply of physicians and the institution of Medicare's prospective-payment system. Much uncertainty remains as to the effects of each alternative system. We assert that this uncertainty calls for experiments to test rigorously the effects of alternative physician payment systems on quality of care, and for new efforts to monitor and assure quality.

Effects on Quality

Fee for Service With Revised Fee Schedule

The prevailing fees that Medicare now pays are generally higher for similar services rendered in hospital than in an ambulatory setting, for more technical services and surgical procedures than for less technical services and for similar services provided by more specialized than by less specialized physicians. We assume that a new fee schedule would narrow these differences. The amount that Medicare would pay would increase relatively for outpatient services, for less technical services such as patient counseling and for services from less specialized physicians. Physicians would receive relatively more from Medicare for these services than under the present system. This would result in an increased financial incentive to provide these services. Amounts payable by Medicare would decrease relatively for most inpatient services, for technical services such as endoscopy or surgical intervention and for services from specialists. Physicians would receive less from Medicare for these services than they do now.

The changes in the amounts Medicare would pay would affect patients' out-of-pocket costs for services from physicians who do not accept assignment. If physicians did not change their charges in response to the changes in the amounts Medicare would pay, patients' out-of-pocket costs would increase (compared with the present payment system) for inpatient services, surgical and technical services and specialist services. Out-of-pocket costs would decrease for outpatient and nontechnical services and services from less specialized physicians. These changes in out-of-pocket costs would provide incentives for patients to purchase fewer inpatient and technical services and services from specialists and more outpatient and nontechnical services. In addition, over time, physicians would be expected to alter their charges toward the amounts specified in the new Medicare fee schedule.

Competition among physicians would tend to result in lower fees charged by specialists and lower charges for inpatient, technical and surgical services. This, in turn, would reduce out-of-pocket costs to patients. We would not expect physicians' charges to fall to the Medicare reimbursement rate, however, especially if other payers did not adopt Medicare's fee schedule. If the resulting out-of-pocket costs remained too high, there could be political pressure to limit them by, for instance, requiring physicians to accept assignment for Medicare reimbursement. Physicians might respond to reduced fees by attempting to increase the number of services provided, but this would be limited, at least for hospital services, by utilization review of those services monitored by organizations such as peer review organizations.

In sum, compared with the present payment system, patients would tend to face higher out-of-pocket costs for and to reduce their purchases of inpatient and technical and surgical services; to face lower (or zero) out-of-pocket costs, and to increase their demand for comparable outpatient services, less technical services and services from less specialized physicians. Physicians would have an increased financial incentive to provide outpatient services and less technical services than they do now.

The impact of these changes on quality of care depends on assumptions made about the response of patients to changes in the price of physicians' services and the response of physicians to changes in their incomes. These assumptions are developed more fully elsewhere.[1] Compared with patterns of care under the present physician payment system, we predict the following would occur:

- Patients would use more outpatient services, and services of all kinds would tend to shift to the outpatient setting; patients would tend to be admitted to hospital less frequently.
- Patients would tend to use fewer surgical and technical procedures and to increase their use of less technical or "cognitive" services such as physician visits and counseling time. The mix of services provided by most physicians would also shift in these directions.

These changes would be more likely to occur among poorer patients because out-of-pocket costs would have a more powerful influence on their choices; for example, when compared with the present situation, poorer patients would be less likely to be cared for by specialists or to receive technical procedures than well-to-do patients. This conjecture is supported by results from the Rand Health Insurance Experiment.[17,18]

What are the expected differences in the quality of the care received under the "new" fee schedule? The answer depends in part on what one believes about the patterns of care in the present system. If one believes that there are now excessive or unnecessary admissions to hospital, surgical and diagnostic procedures, laboratory tests and the use of specialists, then reduction in these services or substitution for them by services

such as additional physician time or services from less specialized physicians may lead to improvements in the quality of care on average (though in any particular case there may be a shortfall).

There is some evidence that before Medicare's prospective-payment system was instituted, there were unnecessary admissions and days of hospital care, unnecessary operations and unnecessary laboratory tests for Medicare patients in hospital.[1] However, the decrease in hospital admissions and days of care for Medicare patients since the institution of the prospective-payment system[19] may make the excess use of these services now less likely. Whether reducing the use of specialists would diminish the quality of care is uncertain.[1]

Thus, it is difficult to predict the overall effects on quality of care of the changes in the use of services expected under such a revised fee schedule. For some patients the quality of care would likely improve due to the change in mix of services received, and for others it would decline. Some patients would benefit from increased physician time and counseling; a patient with hypertension may achieve better blood pressure control and have a reduced risk of stroke. Perhaps some patients would benefit from forgoing a surgical or technical procedure with little expected benefit. For these patients, quality of care would improve. Some patients, however, would postpone or fail to receive a beneficial operation or an expensive procedure, or choose to forgo needed services from specialists.

Most of the changes in quality of care likely to occur would be small; most would occur in the "grey areas" of medical decision-making. Poorer people and others for whom out-of-pocket costs are more important, particularly those with chronic or complex illness who require many technical medical services or more specialized or expensive services, would be more likely to forgo needed medical services. They would be expected to represent a disproportionately large fraction of persons receiving lower quality of care under the new revised payment system. Poorer persons, however, would also be more likely to benefit from reduced out-of-pocket costs for outpatient services and less technical services.

Physician DRGs for Inpatient Physician Services

The effects of paying a prospectively determined lump sum for all physician services associated with an episode of inpatient care depend on how the payment system is designed.[1,5] Who receives the payment and how it is distributed among the physicians participating in the care of the patient are particularly important. We will consider two cases. In both cases, assignment will be considered mandatory.

In the first, the attending physician (perhaps the admitting physician) receives the payment and as the gatekeeper physician "hires" other physicians who also provide care to the patient. The administrative burden on the attending physician would be substantial. In the second, the lump sum payment is made to the medical staff of the hospital, and the payment is distributed among those physicians caring for the patient according to the weighted fraction of charges submitted by each physician. If total charges were to exceed total payment, then each physician would receive less than a dollar for each dollar he or she charged.

Attending physician model. If the attending physician receives the physician DRG payment, the risks of significant financial gains or losses are substantial.[20] There are several possibilities for reducing this financial risk, including the liberal use of outlier payments[1]; we assume that some means of reducing the risk to the attending physician will be used, though a financial risk to the attending physician is still present.

Attending physicians have a financial incentive to reduce expenditures for consultations or procedures that they believe are of minimal benefit to the patients they admit. This could increase the efficiency and reduce the cost of inpatient care. As noted earlier, the available evidence suggested that before the beginning of Medicare's prospective-payment system, some unnecessary inpatient services were provided under fee-for-service reimbursement of physicians and cost-based reimbursement of hospitals. Lengths of stay have already been reduced under prospective payment. It is not clear whether additional reductions in inpatient services can be made without disproportionately reducing the quality of care.

The incentives facing attending physicians may also lead to skimping on their services to patients or on needed consultant physician services, particularly for patients whose costs of services are in excess of a physician DRG payment. Such patients may fail to receive needed services of specialists or may be discharged prematurely, with an increased risk of mortality and morbidity and reduced quality of care. There is a potential for disruption of and damage to relationships among physicians and of medical consultation practices,[21] with adverse effects on the quality of both inpatient and outpatient care.

Patients who are likely to require resources costing much more than an expected physician DRG payment may have difficulty finding a physician willing to admit them to hospital or to assume responsibility for their care: they will suffer reduced access to care. If both physician and hospital are paid on a DRG basis, the incentive for both to avoid caring for or to "dump" such patients may be very strong.

Under the current prospective-payment system for hospitals, patient care including surgical procedures has been shifted to the outpatient setting. This has not necessarily reduced the volume of procedures or the incomes of physicians. Under physician DRGs, there would be an additional incentive to shift care of patients to the less-regulated outpatient setting, particularly for those patients for whom the expected physician DRG payment for inpatient care is considered inadequate. If care is inappropriately shifted, the risk to patients is increased.

In sum, physician DRGs paid to attending physicians provide incentives to increase the efficiency of inpatient care in addition to those embodied in the hospital prospective-payment system. This system of physician payment, however, also poses considerable risks of skimping on inpatient care and reduced access to care, particularly for those patients likely to require services costing more than the physician DRG payment.

Hospital staff. Payment of the physician DRG sum to the hospital staff allows pooling of financial risks across a number of physicians and a larger number of patients. Lowering each individual physician's risk of financial loss would be expected to reduce the risk of skimping on needed physician services for patients admitted to hospital and may mitigate the threat of

reduced access to inpatient care for potentially "unprofitable" patients. If the medical staff is well organized, however (and particularly if it cooperates closely with the hospital), the threat to access for those patients may be substantial.

Physicians whose practices consist largely of patients likely to require more services than average for the physician DRG, such as the more severely ill patients within each DRG, may be perceived to be sources of financial losses by the rest of the medical staff. There may be pressure on such physicians to alter their patient mix or even—if the hospital beds can be filled by patients from other physicians—efforts to remove them from the hospital staff.

In summary, the risks of reduced access to care and reduced quality of care are present under both kinds of physician DRGs, though these dangers may be smaller with payment to the medical staff than with payment to the attending physician. These risks could be reduced by adherence of physicians to the medical ethic, by effective utilization review and quality assurance by peer review organizations, by the risk of malpractice litigation and perhaps by competition from other physicians for patients.

Increased Enrollment of Medicare Beneficiaries in HMOs

HMOs provide medical care to their enrollees at lower cost than fee-for-service medicine, largely through lower use of hospital care.[22] HMOs have a financial incentive to control the use of services by their enrollees, including services that are of little or no benefit. This incentive may be passed on to physicians in an HMO directly, or may be translated into utilization controls imposed on physicians.[23,24] This incentive could also lead to underprovision of needed services and reduced quality of care.

HMOs also have an incentive to avoid enrolling persons who are likely to use large amounts of services unless the capitation payment is accurately adjusted for this increased expected cost. Without such a careful adjustment or the adoption of some mechanism to prevent adverse selection of enrollees by HMOs, access to care may be reduced for those persons with chronic illnesses or who otherwise require extensive medical services.

Physicians in HMOs operate under more organizational controls than do fee-for-service providers.[8,23,25] If there is increased internal review by group physicians, the quality of care might be improved. If physicians were not allowed to order needed specialist consultations, quality of care could suffer. The effects depend critically on the ways HMOs influence their physicians.

Review of assessments of care provided by HMOs leads to the conclusion that established prepaid group practices can provide care to their enrollees of technical quality comparable to that provided in fee-for-service medicine and can provide this care at a lower cost; consumer satisfaction, however, is lower in HMOs.[1,8,21,23,25-28] It is unwarranted, however, to conclude that extending HMO care to a much larger fraction of the population, and particularly to the elderly under Medicare or the poor, would not threaten quality of care for these groups. There is simply little experience with provision of care by HMOs to the elderly or poor: most HMO enrollees are young and employed. Compared with the population usually served by HMOs, the poor and the elderly will more often need continuity of care for management of chronic conditions, and may more frequently need specialized care for complicated conditions. Physical barriers and bureaucratic complexities of an HMO that are easily managed by an employed population may be difficult impediments for elderly enrollees. On the other hand, lower out-of-pocket costs in HMOs may result in greater financial access to services for poorer Medicare enrollees. Finally, newer organizations operating as HMOs may differ in important respects from traditional prepaid group practices. If newer HMOs are organized to increase the individual financial risk to primary physicians for the costs of their referrals or other services used by patients assigned to them (the gatekeeper model), then the possibility of skimping on needed care would increase.

For traditional HMOs to provide care to the elderly or poor of quality equivalent to the care provided to their current enrollees, they may have to modify their medical and administrative practices in response to the special needs of elderly and chronically ill persons. If growth in enrollment is rapid in established HMOs, or if new HMOs are less well run than the established HMOs, quality of care may suffer.

In sum, the increased use of HMOs offers the possibility of maintaining the quality of medical care while controlling costs, but there is much uncertainty. The need for monitoring the quality of care as more people receive care through HMOs is clear. An evaluation now under way of several demonstration projects with Medicare beneficiaries in HMOs includes assessing quality of care.[29] Such efforts will become even more important if the number of Medicare beneficiaries and the poor enrolled in HMOs is to be rapidly increased.

Summary and Conclusions

It has proved difficult to predict the effects on quality of care of changing the way physicians are paid for their services. Each of the alternatives considered here holds out the possibility of either increasing or decreasing the quality of care. It is not possible to determine which result will occur. We can predict that the effects on quality of care will not be uniform: some groups of patients are likely to benefit and some to suffer. Under each of the alternatives, those Medicare beneficiaries who are poor or who suffer complex chronic illnesses appear to be at greatest risk of reduced access to care and reduced quality of care.

The uncertainty about the effects of each proposed change suggests a need for several steps to prevent or minimize the untoward effects of a new payment system on quality of care. First, an experiment to test the impact of a proposed change would allow assessment of its effects on access to care and quality of care—as well as cost of care. Such an assessment would require collecting data on the outcomes and processes of care.[1,30] If adverse effects such as premature mortality, decreased functioning and quality of life or increased morbidity were found to occur, the new payment system could be altered before it did widespread harm. Second, to prevent short-term harmful effects from occurring if a change in physician reimbursement is implemented nonexperimentally, the quality of care should be carefully monitored and appropriate "real time" responses made to minimize the adverse effects on patient care. The kinds of effects most likely to occur can be predicted by analyses such as those reported here. These predictions can serve as guidelines for focusing efforts to prevent deterioration in quality of care.

Extensive changes in our system of providing medical care and of its financing appear to be inevitable. The challenge to the medical community is to prevent these changes from adversely affecting quality, especially for society's more vulnerable—the poor and the sick.

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